



# WASHOE COUNTY

"Dedicated To Excellence in Public Service"

www.washoecounty.us

CM/ACM KS

Finance DN

DA ✓

Risk Mgt. DE

HR N/A

Comptroller MS

## STAFF REPORT

BOARD MEETING DATE: October 27, 2015

**DATE:** October 2, 2015

**TO:** Board of County Commissioners

**FROM:** Clara Lawson, P.E., PTOE, Licensed Engineer, Engineering and Capital Projects, Community Services, 328-3603, [clawson@washoecounty.us](mailto:clawson@washoecounty.us)

**THROUGH:** Dwayne Smith, P.E., Division Director, Engineering and Capital Projects Community Services Department, 328-2043, [desmith@washoecounty.us](mailto:desmith@washoecounty.us)

**SUBJECT:** Recommendation to approve an Interlocal Traffic Signal Maintenance Agreement retroactive to July 1, 2015, between the City of Reno and Washoe County for maintenance of the County's traffic signals for FY 2015-2016 with automatic renewal options through end of FY 2019-2020 for a time and material agreement in the amount [not to exceed \$50,000 annually]. (All Commission Districts)

### SUMMARY

Historically, Washoe County has contracted with the City of Reno to perform maintenance of Washoe County owned traffic signals and school flashers and also to perform USA locates for construction work. Washoe County has 17 traffic signals and approximately 40 school flashers located throughout the unincorporated county areas.

The previous agreements included an annual base fee and quarterly payments based on actual labor costs. Working with the City of Reno, an updated agreement is presented for consideration which eliminates the annual base fee component and includes only the monthly labor costs associated with the required maintenance efforts. The term of the new agreement is five (5) years and includes a retroactive component to July 1st, 2015.

Washoe County benefits from this agreement by avoiding the costs associated with specialty equipment and personnel recognizing the limited number of traffic signals that require maintenance and service on an annual basis.

Washoe County Strategic Objective supported by this item: Safe, secure and healthy communities.

### PREVIOUS ACTION

On July 27, 2010, the Board of County Commissioners approved an Agreement for Traffic Signal Maintenance with the City of Reno for an annual fee of \$86,800.

AGENDA ITEM # 592

**BACKGROUND**

The first year of the previous agreement was based on the City of Reno's best estimation on what it would cost to maintain the County's traffic signals. This was determined by calculating the staff-hours per signal for Reno's traffic signal system and using that rate multiplied by the number of traffic signals in Washoe County. The initial annual cost estimate was \$86,800. The estimate for the second and remaining years of the agreement were based on the actual cost of the previous year and were subsequently reduced to approximately \$50,000 per year.

This agreement utilizes the City of Reno's direct costs, but will be paid quarterly as the work is performed. There was a regular charge out rate, overtime rate, equipment rate and materials were based on Reno's direct costs. In the event that Washoe County chooses to perform the duties identified under this agreement, the agreement can be terminated in writing and within 60 days.

**FISCAL IMPACT**

The Fiscal Impact for this agreement is not to exceed \$50,000 per fiscal year. Funding for the Traffic Signal Maintenance contract is budgeted annually in the CSD Engineering & Capital Projects budget under Professional Services. Appropriations in the amount of \$73,000 have been budgeted for FY16 in C105500-710100 for professional services and \$12,000 has been budgeted in FY16 in C105500-710205 for materials.

**RECOMMENDATION**

It is recommended that the Board of County Commissioners to approve an Interlocal Traffic Signal Maintenance Agreement retroactive to July 1, 2015, between the City of Reno and Washoe County for maintenance of the County's traffic signals for FY 2015-2016 with automatic renewal options through end of FY 2019-2020 [not to exceed \$50,000 annually].

**POSSIBLE MOTION**

Should the Board agree with staff's recommendation, a possible motion would be: "Move to approve an Interlocal Traffic Signal Maintenance Agreement retroactive to July 1, 2015, between the City of Reno and Washoe County for maintenance of the County's traffic signals for FY 2015-2016 with automatic renewal options through end of FY 2019-2020 in the amount [not to exceed \$50,000 annually]."

# INTERLOCAL TRAFFIC SIGNAL MAINTENANCE AGREEMENT BETWEEN CITY OF RENO AND WASHOE COUNTY

THIS INTERLOCAL TRAFFIC SIGNAL MAINTENANCE AGREEMENT made and entered into this \_\_\_ day of \_\_\_\_\_, 2015, by and between the CITY OF RENO, a municipal corporation, hereinafter called the CITY, and WASHOE COUNTY, a political subdivision organized and existing under and by virtue of the laws of the State of Nevada, hereinafter called the COUNTY;

WITNESSETH:

WHEREAS, NRS 277.180 provides that any one or more public agencies may contract with any one or more other public agencies to perform any governmental service, activity or undertaking which any of the public agencies entering into the contract is authorized by law to perform; and

WHEREAS, the City and the County are each a "public agency" in accordance with NRS 277.100; and

WHEREAS, it is the COUNTY'S desire to have the CITY provide traffic signal maintenance service for Washoe County traffic signals; and

WHEREAS, the CITY has the equipment and personnel to provide said traffic signal maintenance; and

WHEREAS, the parties previously entered into a five-year traffic-signal-maintenance agreement, dated August 25, 2010; and

NOW, THEREFORE, the CITY and the COUNTY, in consideration of the mutual covenants hereinafter set forth agree as follows:

The CITY agrees:

1. To provide 'REGULAR TRAFFIC SIGNAL MAINTENANCE SERVICES' as described in Exhibit A and in accordance with the Maintenance Management System Guidelines, attached as Exhibit D, during normal working hours; provide 'ADDITIONAL TRAFFIC SIGNAL SERVICES' during normal working hours when feasible and overtime hours when needed, to include, but are not limited to items listed in Exhibit A. The Washoe County traffic signals are listed in Exhibit B; signals may be added or deleted by written notification to the Reno Director of Public Works. Services rendered by the CITY shall not exceed a value of \$50,000 per contract year, unless otherwise agreed to in writing by the City's City Manager and the County's County Manager or through their respective designated representative.
2. To quarterly, on or about the tenth day of each quarter, provide the COUNTY with a quarterly bill intended to cover all 'REGULAR TRAFFIC SIGNAL MAINTENANCE SERVICES' and 'ADDITIONAL TRAFFIC SIGNAL SERVICES' for work provided during normal working hours and overtime hours according to the fee schedule (Exhibit C).

To annually, on or about February 1<sup>st</sup> of each year, provide the fee schedule (Exhibit C) for the next budget year, per City's actual operating cost increases for wages, benefits, equipment, fuel etc.

3. To provide monthly documentation of work performed on Washoe County signals, including Maintenance Management System Guidelines records and daily work reports completed by the employee performing work.

The COUNTY agrees:

1. This Agreement operates retroactively to July 1, 2015, the beginning of the fiscal year.
2. This Agreement replaces the traffic-signal-maintenance agreement between the COUNTY and CITY, dated August 25, 2010.
3. To investigate complaints relating to signal maintenance needs before relaying information to the CITY.
4. To make payments to the CITY within thirty (30) days of receipt of any billing provided by the CITY.
5. To order, pay for and provide the CITY with all materials and supplies requested by the CITY or determined necessary by the COUNTY and associated with traffic signal maintenance and repair, as provided for by this Agreement.
6. To notify the CITY of proposed new signal installations and to allow the CITY to review and comment on traffic signal design plans.

Both the CITY and the COUNTY agree:

1. That either party, via the CITY'S City Manager or the COUNTY'S County Manager or through their respective designated representative, may terminate this Agreement by giving written notice, sixty (60) days before such termination, to the other party.
2. That this Agreement shall be in effect for a period of five years from the date and year first written unless terminated pursuant to (1) above.
3. To develop, maintain and adjust, as needed, a protocol for call out of personnel including names, telephone numbers, and instructions for County Sheriff personnel and City dispatchers.
4. Subject to the limitations of Chapter 41 of NRS and any other applicable laws, and without waiving its statutory protections, the parties agree that each is responsible for any liability or loss that may be incurred as a result of any claim, demand, cost, or judgment made against that party arising from any negligent act by any of that party's employees, agents, or servants in connection with the performance of this Agreement.
5. The parties further agree to the extent allowed by law pursuant to Nevada Revised Statute chapter 41, to hold harmless, indemnify, and defend each other from any and all losses, liabilities, or expenses of any nature to the person or property of another to which each may be subjected as a result of any claim, demand, action or cause of action arising out of the negligent acts, errors, or omissions on the part of the employees, agents, or servants of the others.
6. That all communications/notices required pursuant to the Agreement shall be given as hereinafter provided, unless written notice of a new designee is sent certified or registered mail, to the other party, as follows:

COUNTY: Dave Solaro, P.E.  
Community Services Director  
1001 E. Ninth Street  
Reno, Nevada 89512  
(775) 328-3600

RENO: John Flansberg, P.E.  
Public Works Director  
P.O. Box 1900  
Reno, Nevada 89505  
(775) 334-2350

- 7. This Agreement contains the entire agreement of the parties with respect to the matters addressed herein. This Agreement may not be amended, nor may any of the terms, covenants, representations, warranties or conditions hereof be waived, except by a written instrument executed by the party against which such amendment is to be charged.
- 8. The only parties who may enforce this Agreement and any of the rights under this Agreement are the parties hereto

In Witness Thereof, the Parties have executed this Agreement as of the date and year appearing herein.

CITY OF RENO

COUNTY OF WASHOE

\_\_\_\_\_  
Hillary L. Schieve, Mayor

\_\_\_\_\_  
Marsha Berkbigler, Chair  
Board of County Commissioners

ATTEST:

ATTEST:

\_\_\_\_\_  
Reno City Clerk

\_\_\_\_\_  
Washoe County Clerk

Approved as to Form:

\_\_\_\_\_  
Deputy City Attorney

## **Exhibit A**

### **Traffic Signal Maintenance Services**

#### **Regular Traffic Signal Maintenance Services**

- Signal Preventative Maintenance
- Cabinet/ground Preventative Maintenance
- Safety/Conflict Monitors
- General Signal Maintenance
- Illuminated Street Name Sign Maintenance

#### **Additional Traffic Signal Services**

Including but not limited to the following

- School Flasher Maintenance
- Signal Response Pedestrian Signal Repair
- Bench Repair
- Vehicle Detection
- Bulb Replace
- Signal Head Repair
- Cabinet Rehab/Construction
- New Signal Inspection
- USA Locates
- Limited Street Light Maintenance

## **Exhibit B**

### Washoe County Traffic Signals

#### **Location**

1. Arrowcreek Pkwy /Zolezzi Lane
2. Mt. Rose Hwy/Galena Fire Station
3. Mt. Rose Hwy/Thomas Creek Rd
4. Mt Rose Hwy/Wedge Pkwy
5. Pyramid Blvd/Eagle Canyon Dr
6. Pyramid/Blvd/Golden View
7. S.R. 28/Country Club Dr
8. S.R. 28/Crystal Bay
9. S.R. 28/Northwood Blvd/Southwood Blvd
- 10.S.R. 28/Village Blvd
- 11.Sun Valley Blvd/1<sup>st</sup> Ave
- 12.Sun Valley Blvd/2<sup>nd</sup> Ave
- 13.Sun Valley Blvd/4<sup>th</sup>Ave
- 14.Sun Valley Blvd/5<sup>th</sup> Ave
- 15.Sun Valley Blvd/7<sup>th</sup>Ave
- 16.Sun Valley Blvd/Dandini Blvd
- 17.Wedge Pkwy/Golden Gate Dr.

## **Exhibit C**

### **Fee Schedule for FY 2015-2016**

*The charged rate shall be calculated using a 2.1 multiplier and the current wage rate. As of October 2015 the charged rates are as shown below.*

Regular time hourly rate for Traffic Signal Mechanic	\$71.90
Regular time hourly rate for Traffic Signal Technician	\$79.25
Overtime hourly rate for Traffic Signal Mechanic	\$107.85
Overtime hourly rate for Traffic Signal Technician	\$118.88

Equipment per MaintStar charge rates.

Supplies and materials will be charged at cost

Exhibit D

**ACTIVITY GUIDELINE**  
**MAINTENANCE MANAGEMENT SYSTEM**

City of Reno  
Management Unit : 0000122 - SIGNALS

<b>WORK ACTIVITY</b>	<b>PM T.SIGNAL</b>	<b>CODE</b>	<b>201</b>
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**DESCRIPTION OF WORK**

Inspection and repair of overhead traffic signals following a preventative maintenance check list. Work may include repair or replacement of damaged or defective signal head components, cleaning of all reflectors and lenses, touch-up painting signal heads, inspection of poles, mast arms and associated hardware and relamping signal heads as necessary .

<b>PLANNING CRITERIA</b>	07/01	08/01	09/01	10/01	11/01	12/01	01/01	02/01	03/01	04/01	05/01	06/01
	07/31	08/31	09/30	10/31	11/30	12/31	01/31	02/29	03/31	04/30	05/31	06/30
	8	8	9	9	9	9	9	8	9	8	7	8

Performed annually - following check list. - may be affected by weather.

<b>RESOURCE REQUIREMENTS</b>	<b>WORK METHOD</b>	<b>CHECK POINTS</b>
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<b>Personnel</b>	<b>Qty</b>
TRF SIG MECH	1.25
<b>Equipment</b>	<b>Qty</b>
BOOM TRUCK	1.00
<b>Materials</b>	<b>Qty</b>
3S LENS	1.0 EA
FRAGS	2.0 PO
HAND HOLE CVR	0.1 EA
PULL BX LD 5	1.0 EA
PULL BOX 5	1.0 EA
BACKPLATE	1.0 EA

- PRE-DEPARTURE**  
1. Ready supplies, equipment and perform CDL inspection check.
- AT WORK SITE**  
2. Perform visual inspection. Record findings  
3. Set up work zones, signs and cones.  
4. Carry out maintenance and repair as per check list.  
5. Clean up - vacate site.
- END OF SHIFT**  
6. Document work, and signal guideline checklist (see attached)

- Observe traffic flow
- Appropriate personal protective equipment (PPE)
- Follow current NV Work Zone Traffic Control Handbook and MUTCD
- Move work zone signs/cones.
  
- Complete records

<b>FEATURE INVENTORY ITEM</b>	<b>EFFECTIVE</b>	<b>SUPERCEDES</b>
227.00 SIGNALS		
<b>AVERAGE DAILY PRODUCTION</b>	<b>APPROVAL</b>	
1.50 INTSECT		

**ACTIVITY GUIDELINE**  
**MAINTENANCE MANAGEMENT SYSTEM**

City of Reno  
 Management Unit : 0000122 - SIGNALS

<b>WORK ACTIVITY</b>	<b>CABINET PM</b>	<b>CODE</b>	<b>202</b>
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**DESCRIPTION OF WORK**

Preventative maintenance for traffic signal cabinet. This includes cleaning of cabinet and its components, checking operation of signal and its components, and making repair as necessary. A detailed check list is followed to allow all components to be properly inspected and maintained.

<b>PLANNING CRITERIA</b>	07/01	08/01	09/01	10/01	11/01	12/01	01/01	02/01	03/01	04/01	05/01	06/01
	07/31	08/31	09/30	10/31	11/30	12/31	01/31	02/29	03/31	04/30	05/31	06/30
	8	8	9	8	8	10	8	8	9	8	8	8

Perform semi-annually following checklist and includes one operational observation check to be conducted with at least four months between PM and operational check. May be affected by weather.

<b>RESOURCE REQUIREMENTS</b>	<b>WORK METHOD</b>	<b>CHECK POINTS</b>
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<table> <tr> <td><u>Personnel</u></td> <td><u>Qty</u></td> </tr> <tr> <td>TRF SIG TECH</td> <td align="center">0.85</td> </tr> <tr> <td><u>Equipment</u></td> <td><u>Qty</u></td> </tr> <tr> <td>PICKUP/UTILITY TRUCK</td> <td align="center">1.00</td> </tr> <tr> <td>SHOP VAC</td> <td align="center">1.00</td> </tr> <tr> <td><u>Materials</u></td> <td><u>Qty</u></td> </tr> <tr> <td>RAGS</td> <td align="center">2.0 PO</td> </tr> <tr> <td>WIRE</td> <td align="center">1.0 FO</td> </tr> <tr> <td>CLEANING MTL</td> <td align="center">1.0 CA</td> </tr> <tr> <td>MIS NUTS&amp;BOLT</td> <td align="center">5.0 EA</td> </tr> <tr> <td>AIR FILTER</td> <td align="center">1.0 EA</td> </tr> <tr> <td>HAND HOLE CVR</td> <td align="center">1.0 EA</td> </tr> <tr> <td>FLASHER-REG</td> <td align="center">1.0 EA</td> </tr> </table>	<u>Personnel</u>	<u>Qty</u>	TRF SIG TECH	0.85	<u>Equipment</u>	<u>Qty</u>	PICKUP/UTILITY TRUCK	1.00	SHOP VAC	1.00	<u>Materials</u>	<u>Qty</u>	RAGS	2.0 PO	WIRE	1.0 FO	CLEANING MTL	1.0 CA	MIS NUTS&BOLT	5.0 EA	AIR FILTER	1.0 EA	HAND HOLE CVR	1.0 EA	FLASHER-REG	1.0 EA	<p><b>PRE-DEPARTURE</b></p> <ol style="list-style-type: none"> <li>Ready equipment and perform CDL inspection check.</li> </ol> <p><b>AT WORK SITE</b></p> <ol style="list-style-type: none"> <li>Perform visual inspection, record findings per check list.</li> <li>Set up work zone.</li> <li>Carry out maintenance and repair as per check list.</li> <li>Clean up and vacate site.</li> </ol> <p><b>END OF SHIFT</b></p> <ol style="list-style-type: none"> <li>Document work.</li> <li>Refuel Vehicles.</li> </ol>	<ul style="list-style-type: none"> <li>-Observe operation and traffic flow</li> <li>-Follow current NV Work Zone Traffic Control Handbook and MUTCD</li> <li>-Follow Checklist</li> <li>- Appropriate PPE</li> <li>-Move work zone signs/cones</li> <li>-Complete records</li> </ul>
<u>Personnel</u>	<u>Qty</u>																											
TRF SIG TECH	0.85																											
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<b>FEATURE INVENTORY ITEM</b>	<b>EFFECTIVE</b>	<b>SUPERCEDES</b>
227.00 SIGNALS		
<b>AVERAGE DAILY PRODUCTION</b>	<b>APPROVAL</b>	
6.00 CABINETS		

# ACTIVITY GUIDELINE

## MAINTENANCE MANAGEMENT SYSTEM

City of Reno  
Management Unit : 0000122 - SIGNALS

<b>WORK ACTIVITY</b>	<b>SAFETY MONITOR</b>	<b>CODE</b>	<b>203</b>
<b>DESCRIPTION OF WORK</b>			

Remove existing malfunction management unit from cabinet, exchange with a tested unit.  
Return removed unit to signal shop test bench and verify correct operation on test equipment.  
Download and document test results. Accomplishments include both the test (1) and the replacement (1).

<b>PLANNING CRITERIA</b>	07/01	08/01	09/01	10/01	11/01	12/01	01/01	02/01	03/01	04/01	05/01	06/01
	07/31	08/31	09/30	10/31	11/30	12/31	01/31	02/29	03/31	04/30	05/31	06/30
	10	10	9	8	8	7	7	7	8	8	9	9

ITMS and ITE guidelines require MMUs be tested and results documented at least once a year.  
Accomplishment count = both test (1) and replacement (1) for a total of 2.

<b>RESOURCE REQUIREMENTS</b>	<b>WORK METHOD</b>	<b>CHECK POINTS</b>												
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"><i>Personnel</i></td> <td style="text-align: center;"><i>Qty</i></td> </tr> <tr> <td>TRF SIG TECH</td> <td style="text-align: center;">0.85</td> </tr> <tr> <td style="text-align: center;"><i>Equipment</i></td> <td style="text-align: center;"><i>Qty</i></td> </tr> <tr> <td>PICKUP/UTILITY TRUCK</td> <td style="text-align: center;">1.00</td> </tr> <tr> <td style="text-align: center;"><i>Materials</i></td> <td style="text-align: center;"><i>Qty</i></td> </tr> <tr> <td>FLICIT MONITOR</td> <td style="text-align: center;">0.3 EA</td> </tr> </table>	<i>Personnel</i>	<i>Qty</i>	TRF SIG TECH	0.85	<i>Equipment</i>	<i>Qty</i>	PICKUP/UTILITY TRUCK	1.00	<i>Materials</i>	<i>Qty</i>	FLICIT MONITOR	0.3 EA	<p><b>PRE-DEPARTURE</b></p> <ol style="list-style-type: none"> <li>1. Stock truck with supplies and tested units .</li> </ol> <p><b>AT WORK SITE</b></p> <ol style="list-style-type: none"> <li>2. Place signal on flash</li> <li>3. Remove existing unit</li> <li>4. Exchange program card.</li> <li>5. Ensure copy of test inserted on document pocket</li> <li>6. Return to operation, observe correct operation.</li> <li>7. Set time in monitor and verify correct program card</li> <li>8. Clear existing fault log</li> </ol> <p><b>END OF SHIFT</b></p> <ol style="list-style-type: none"> <li>9 Document work.</li> </ol>	<ul style="list-style-type: none"> <li>- Appropriate PPE</li> <li>- Observe traffic flow</li> </ul>
<i>Personnel</i>	<i>Qty</i>													
TRF SIG TECH	0.85													
<i>Equipment</i>	<i>Qty</i>													
PICKUP/UTILITY TRUCK	1.00													
<i>Materials</i>	<i>Qty</i>													
FLICIT MONITOR	0.3 EA													

<b>FEATURE INVENTORY ITEM</b>	<b>EFFECTIVE</b>	<b>SUPERCEDES</b>
227.00 MONITORS		
<b>AVERAGE DAILY PRODUCTION</b>	<b>APPROVAL</b>	
14.00 MONITORS		

# ACTIVITY GUIDELINE

## MAINTENANCE MANAGEMENT SYSTEM

City of Reno  
Management Unit : 0000122 - SIGNALS

<b>WORK ACTIVITY</b>	<b>SCH FLSH MAINT</b>	<b>CODE</b>	205
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**DESCRIPTION OF WORK**

All work associated with the timing of school flasher signals (as supplied on list by School District) -- setting operation days & times, programming "off" days (school holidays), changing clock batteries, checking signal alignment and testing operation to insure proper timing of signals and control of vehicle speed in school zones.

<b>PLANNING CRITERIA</b>	07/01	08/01	09/01	10/01	11/01	12/01	01/01	02/01	03/01	04/01	05/01	06/01
	07/31	08/31	09/30	10/31	11/30	12/31	01/31	02/29	03/31	04/30	05/31	06/30
	22	32	0	0	0	0	0	0	0	0	20	26

Performed twice a year prior to school terms ,or as required due to schedule changes or signal malfunctions.

<b>RESOURCE REQUIREMENTS</b>	<b>WORK METHOD</b>	<b>CHECK POINTS</b>
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<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border-bottom: 1px solid black;"><u>Personnel</u></td> <td style="border-bottom: 1px solid black; text-align: right;"><u>Qty</u></td> </tr> <tr> <td>TRF SIG MECH</td> <td style="text-align: right;">1.25</td> </tr> <tr> <td style="border-bottom: 1px solid black;"><u>Equipment</u></td> <td style="border-bottom: 1px solid black; text-align: right;"><u>Qty</u></td> </tr> <tr> <td>BOOM TRUCK</td> <td style="text-align: right;">0.50</td> </tr> <tr> <td>PICKUP/UTILITY TRUCK</td> <td style="text-align: right;">0.50</td> </tr> <tr> <td style="border-bottom: 1px solid black;"><u>Materials</u></td> <td style="border-bottom: 1px solid black; text-align: right;"><u>Qty</u></td> </tr> <tr> <td>9V BATTERIES</td> <td style="text-align: right;">7.0 EA</td> </tr> <tr> <td>GLASS LENS</td> <td style="text-align: right;">7.0 EA</td> </tr> <tr> <td>RAGS</td> <td style="text-align: right;">1.0 PO</td> </tr> <tr> <td>SIGNAL BULBS</td> <td style="text-align: right;">17.0 EA</td> </tr> <tr> <td>WINDOW CLEANR (TRAI</td> <td style="text-align: right;">1.0 GA</td> </tr> <tr> <td>USA PAINT</td> <td style="text-align: right;">2.0 EA</td> </tr> <tr> <td>REFLECTOR</td> <td style="text-align: right;">3.0 EA</td> </tr> </table>	<u>Personnel</u>	<u>Qty</u>	TRF SIG MECH	1.25	<u>Equipment</u>	<u>Qty</u>	BOOM TRUCK	0.50	PICKUP/UTILITY TRUCK	0.50	<u>Materials</u>	<u>Qty</u>	9V BATTERIES	7.0 EA	GLASS LENS	7.0 EA	RAGS	1.0 PO	SIGNAL BULBS	17.0 EA	WINDOW CLEANR (TRAI	1.0 GA	USA PAINT	2.0 EA	REFLECTOR	3.0 EA	<p><b>PRE-DEPARTURE</b></p> <ol style="list-style-type: none"> <li>1. Ready equipment and perform CDI inspection check.</li> <li>2. Determine route</li> </ol> <p><b>AT WORK SITE</b></p> <ol style="list-style-type: none"> <li>3. Remove battery - kill power.</li> <li>4. Install new battery.</li> <li>5. Reset clock and programs.</li> <li>6. Set current time, day, month and year.</li> <li>7. Set on/off holiday schedule.</li> <li>8. Review program.</li> <li>9. Test override.</li> <li>10. Set to normal.</li> <li>11. Cleaning, bulb change</li> </ol> <p><b>END OF SHIFT</b></p> <ol style="list-style-type: none"> <li>12. Document work.</li> </ol>	<ul style="list-style-type: none"> <li>- Produce schedule list for different zones</li> <li>- Check for available AC power</li> <li>- Check fuse</li> <li>- Traffic Control.</li> <li>- Appropriate PPE.</li> <li>- Check operation of flasher and lights.</li> </ul>
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USA PAINT	2.0 EA																											
REFLECTOR	3.0 EA																											

<b>FEATURE INVENTORY ITEM</b>	<b>EFFECTIVE</b>	<b>SUPERCEDES</b>
43.00 LOCATION:		
<b>AVERAGE DAILY PRODUCTION</b>	<b>APPROVAL</b>	
1.30 LOCATION:		

**ACTIVITY GUIDELINE**  
**MAINTENANCE MANAGEMENT SYSTEM**

City of Reno

Management Unit : 0000122 - SIGNALS

<b>WORK ACTIVITY</b>	<b>INTERC CABLE</b>	<b>CODE</b>	206
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**DESCRIPTION OF WORK**

All work associated with maintaining communications on City owned interconnect cables between City Hall Traffic Signal Control computer and 150 traffic signals. Additionally, work includes maintenance and communications over 8 leased telephone/data lines to 30 traffic signals. Includes testing, diagnosis, replacement of cable and verify operation of wireless communication.

<b>PLANNING CRITERIA</b>	07/01	08/01	09/01	10/01	11/01	12/01	01/01	02/01	03/01	04/01	05/01	06/01
	07/31	08/31	09/30	10/31	11/30	12/31	01/31	02/29	03/31	04/30	05/31	06/30
	7	7	7	7	7	12	12	8	8	8	9	8

Communications problems are reported and logged by the computer system.  
 City has 3 cables, 25 pair, 18 pair and 12 pair branching throughout the City.

<b>RESOURCE REQUIREMENTS</b>	<b>WORK METHOD</b>	<b>CHECK POINTS</b>
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<p><u>Personnel</u>      Qty</p> <p>TRF SIG MECH      1.50</p> <p>TRF SIG TECH      0.50</p> <hr/> <p><u>Equipment</u>      Qty</p> <p>ROOM TRUCK      0.05</p> <p>CUP/UTILITY TRUCK      0.95</p> <hr/> <p><u>Materials</u>      Qty</p> <p>CABLE      100.0 FO</p> <p>SPLICE KIT      5.0 EA</p> <p>TAPE      2.0 RO</p> <p>TERMINAL LUGS      10.0 EA</p>	<p>Pre-Departure</p> <ol style="list-style-type: none"> <li>1. Ready equipment and perform CDL inspection as required</li> <li>2. Determine shop/field fault.</li> <li>3. Signal/no signal/hum.</li> <li>4. Connect signal generator to line.</li> <li>5. Load equipment.</li> </ol> <p>AT WORK SITE</p> <ol style="list-style-type: none"> <li>6. Track signal along route.</li> <li>7. Check signal at destination.</li> <li>8. Trace line back to source. Break as required to determine fault direction.</li> <li>9. Find fault.</li> <li>10. Repair as required/resplice/ replace cable/find spot where contractor dug up and change pair.</li> </ol> <p>END OF SHIFT</p> <ol style="list-style-type: none"> <li>12. Document work.</li> </ol>	<ul style="list-style-type: none"> <li>- Traffic Control</li> <li>- Appropriate PPE</li> <li>- Copy of interconnect cable wire plan</li> <li>- Load test equipment and materials</li> </ul> <ul style="list-style-type: none"> <li>- Hook up shop test equipment</li> <li>- Determine repair/replacement complete/clean signal</li> </ul> <ul style="list-style-type: none"> <li>- Return to shop</li> <li>- Put intersections back on line</li> <li>- Complete records</li> </ul>
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<b>FEATURE INVENTORY ITEM</b>	<b>EFFECTIVE</b>	<b>SUPERCEDES</b>
50.00 CBL MILE		
<b>AVERAGE DAILY PRODUCTION</b>	<b>APPROVAL</b>	
12.00 LABOR HR		

**ACTIVITY GUIDELINE**  
**MAINTENANCE MANAGEMENT SYSTEM**

City of Reno  
 Management Unit : 0000122 - SIGNALS

<b>WORK ACTIVITY</b>	<b>VMS 330 SYSTEM MAINT</b>	<b>CODE</b>	<b>208</b>
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**DESCRIPTION OF WORK**

Enter or modify system parameters as directed by traffic engineering. Check daily for system problems and traffic signal malfunctions reported by the system. Monitor system for proper operation. Generate monthly operation log report. Generate system reports as required. Reload system software when required, backup system parameters monthly. Troubleshoot system failures. Check ITMS.

<b>PLANNING CRITERIA</b>	07/01	08/01	09/01	10/01	11/01	12/01	01/01	02/01	03/01	04/01	05/01	06/01
	07/31	08/31	09/30	10/31	11/30	12/31	01/31	02/29	03/31	04/30	05/31	06/30
	8	8	9	7	8	9	8	8	9	9	8	9

This work is performed routinely on a daily basis.

<b>RESOURCE REQUIREMENTS</b>	<b>WORK METHOD</b>	<b>CHECK POINTS</b>
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<table border="1"> <tr> <td><u>Personnel</u></td> <td><u>Qty</u></td> </tr> <tr> <td>TRF SIG TECH</td> <td>0.85</td> </tr> </table>	<u>Personnel</u>	<u>Qty</u>	TRF SIG TECH	0.85	<ol style="list-style-type: none"> <li>1. Check system operation by access with monitor or keyboard.</li> <li>2. Check system alarms and print reports</li> <li>3. Enter timing and data for signals with keyboard or monitor.</li> <li>4. Use tape drive and floppy discs as required to back up system.</li> <li>5. Change out system components as required, repair, exchange or send for repair of failed components. □ - Consult system manuals.</li> </ol>	<ul style="list-style-type: none"> <li>- Check help files.</li> <li>- Monitor system reports and displays</li> <li>- Monitor system alarms.</li> <li>- Communicate with Engineer</li> </ul>
<u>Personnel</u>	<u>Qty</u>					
TRF SIG TECH	0.85					

<b>FEATURE INVENTORY ITEM</b>	<b>EFFECTIVE</b>	<b>SUPERCEDES</b>
181.00 SIGNALS		
<b>AVERAGE DAILY PRODUCTION</b>	<b>APPROVAL</b>	
8.00 LABOR HR		

# ACTIVITY GUIDELINE

## MAINTENANCE MANAGEMENT SYSTEM

City of Reno  
Management Unit : 0000122 - SIGNALS

<b>WORK ACTIVITY</b>	<b>PED SIGNAL REPAIR</b>	<b>CODE</b>	240
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**DESCRIPTION OF WORK**

All work required to maintain, repair, modify and/or replace malfunctioning pedestrian signals, indications and buttons to insure that pedestrian movement is safely controlled and coordinated.

<b>PLANNING CRITERIA</b>	07/01	08/01	09/01	10/01	11/01	12/01	01/01	02/01	03/01	04/01	05/01	06/01
	07/31	08/31	09/30	10/31	11/30	12/31	01/31	02/29	03/31	04/30	05/31	06/30
	8	8	9	8	9	9	7	8	10	10	7	7

Performed as required in response to service requests and/or as needed

<b>RESOURCE REQUIREMENTS</b>	<b>WORK METHOD</b>	<b>CHECK POINTS</b>
<p><i>Personnel</i>                      <i>Qty</i></p> <p>IRF SIG MECH                      1.25</p> <p>IRF SIG TECH                      0.20</p> <hr/> <p><i>Equipment</i>                      <i>Qty</i></p> <p>VAN                                      1.00</p> <hr/> <p><i>Materials</i>                      <i>Qty</i></p> <p>NS CONVERT KIT                      4.0 EA</p> <p>FUSES                                      1.0 EA</p> <p>MODULE                                      7.0 EA</p> <p>LUBRICANT                                      1.0 CA</p> <p>WIRE                                      4.0 FO</p> <p>PED BUTTON                                      0.3 EA</p> <p>PED DIR SIG                                      0.3 EA</p>	<p><b>PRE-DEPARTURE</b></p> <p>1. Ready equipment and perform CDL inspection</p> <p>2. Receive request</p> <p>3. Proceed to intersection.</p> <p><b>AT WORK SITE</b></p> <p>4. Determine which head has problem</p> <p>5. Replace or repair module, install conversion kit or repair button.</p> <p>6. Check sign plates, egg crates, visors &amp; alignment.</p> <p>7. Check operation.</p> <p><b>END OF SHIFT</b></p> <p>8. Document work.</p>	<ul style="list-style-type: none"> <li>- Traffic Control</li> <li>- Appropriate PPE</li> <li>- Check for voltage</li> <li>- Check buttons</li> <li>- Check fuses and wiring</li> <li>- Check signal components</li> </ul>

<b>FEATURE INVENTORY ITEM</b>	<b>EFFECTIVE</b>	<b>SUPERCEDES</b>
1758 4816.00 EACH		
<b>AVERAGE DAILY PRODUCTION</b>	<b>APPROVAL</b>	
7.00 PED SIGNA		

**ACTIVITY GUIDELINE**  
**MAINTENANCE MANAGEMENT SYSTEM**

City of Reno  
 Management Unit : 0000122 - SIGNALS

<b>WORK ACTIVITY</b>	<b>BENCH REPAIR</b>	<b>CODE</b>	241
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**DESCRIPTION OF WORK**

All work required to troubleshoot and repair faulty electronic traffic signal components, such as; signal controllers, safety monitors; opticom detectors, vehicle detectors, modems, power supplies and other related components.  
 Also includes equipment testing, new evaluation and repair.

<b>PLANNING CRITERIA</b>	07/01	08/01	09/01	10/01	11/01	12/01	01/01	02/01	03/01	04/01	05/01	06/01
	07/31	08/31	09/30	10/31	11/30	12/31	01/31	02/29	03/31	04/30	05/31	06/30
	10	10	8	9	8	7	7	7	8	8	9	9

Performed as required.

<b>RESOURCE REQUIREMENTS</b>	<b>WORK METHOD</b>	<b>CHECK POINTS</b>
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<u>Personnel</u>	<u>Qty</u>
TRF SIG TECH	0.85

- AT BENCH
1. Determine problem/trouble type
  2. Troubleshoot.
  3. Make repairs.
  4. Run equipment for extended period.
  5. Sign off/log in computer - if applicable.
  6. Return warranty items for repair.
  7. Document work.

- ID tag
- Manufacturer's manuals schematics
- Determine operating correctly
- Check under temp extremes
- Sign off
- Return to stock

<b>FEATURE INVENTORY ITEM</b>	<b>EFFECTIVE</b>	<b>SUPERCEDES</b>
227.00 EACH		

<b>AVERAGE DAILY PRODUCTION</b>	<b>APPROVAL</b>
9.00 LABOR HR	

**ACTIVITY GUIDELINE**  
**MAINTENANCE MANAGEMENT SYSTEM**

City of Reno

Management Unit : 0000122 - SIGNALS

<b>WORK ACTIVITY</b>	<b>LOOP/DETECTION MAINT</b>	<b>CODE</b>	<b>242</b>
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**DESCRIPTION OF WORK**

All work required to diagnose maintain and/or repair traffic detector loop malfunctions. Activity is performed to insure proper detection loop operation and safely control traffic movement at intersections.

<b>PLANNING CRITERIA</b>	07/01	08/01	09/01	10/01	11/01	12/01	01/01	02/01	03/01	04/01	05/01	06/01
	07/31	08/31	09/30	10/31	11/30	12/31	01/31	02/29	03/31	04/30	05/31	06/30
	8	8	9	8	8	9	8	8	9	8	8	9

Performed as required in response to service requests or as needed.

<b>RESOURCE REQUIREMENTS</b>	<b>WORK METHOD</b>	<b>CHECK POINTS</b>
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<p><i>Personnel</i>      <i>Qty</i></p> <p>TRF SIG MECH      1.50</p> <p>TRF SIG TECH      0.40</p> <hr/> <p><i>Equipment</i>      <i>Qty</i></p> <p>PICKUP/UTILITY TRUCK      1.00</p> <hr/> <p><i>Materials</i>      <i>Qty</i></p> <p>AMPLIFIER      0.1 EA</p> <p>CABLE      4.0 FO</p> <p>NUTS/LUGS      10.0 EA</p> <p>SEALING PACS      2.0 EA</p> <p>WIRE NUTS      5.0 EA</p>	<p>PRE-DEPARTURE</p> <p>1. Ready equipment and perform CDL inspection</p> <p>2. Travel to work site.</p> <p>AT WORK SITE</p> <p>3. Determine if there is a detector problem.</p> <p>4. Test amplifier and controller cabinet or field problem.</p> <p>5. Remove loop lead and test.</p> <p>6. Test loop lead in.</p> <p>7. Check splices.</p> <p>8. Re-hook good loops and adjust timing.</p> <p>9. Reset Amp.</p> <p>END OF SHIFT</p> <p>10. Document work.</p>	<p>- Traffic Control</p> <p>- Appropriate PPE</p> <p>- Check connections</p> <p>- Check ground or open</p> <p>- Check street condition for signs of damage or failure</p> <p>- Observe operation</p>
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<b>FEATURE INVENTORY ITEM</b>	<b>EFFECTIVE</b>	<b>SUPERCEDES</b>
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6210.00 LOOPS		
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<b>AVERAGE DAILY PRODUCTION</b>	<b>APPROVAL</b>
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9.00 LABOR HR	
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# ACTIVITY GUIDELINE

## MAINTENANCE MANAGEMENT SYSTEM

City of Reno  
Management Unit : 0000122 - SIGNALS

<b>WORK ACTIVITY</b>	<b>VIDEO MICR DETECTORS</b>	<b>CODE</b>	<b>243</b>
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**DESCRIPTION OF WORK**

All work required to diagnose, maintain and/or repair video/microwave detectors. Activity is performed to ensure safe operation and safety control traffic movement at intersections.

<b>PLANNING CRITERIA</b>	07/01	08/01	09/01	10/01	11/01	12/01	01/01	02/01	03/01	04/01	05/01	06/01
	07/31	08/31	09/30	10/31	11/30	12/31	01/31	02/29	03/31	04/30	05/31	06/30
	9	9	9	8	8	8	6	6	10	9	9	9

Performed as required in response to service requests or as needed.

<b>RESOURCE REQUIREMENTS</b>	<b>WORK METHOD</b>	<b>CHECK POINTS</b>
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<p><u>Personnel</u>                      <u>Qty</u></p> <p>TRF SIG MECH                      1.75</p> <p>TRF SIG TECH                      0.40</p> <hr/> <p><u>Equipment</u>                      <u>Qty</u></p> <p>ROOM TRUCK                      1.00</p> <p>IMPRESSOR                      1.00</p> <p>CONCRETE SAW                      1.00</p> <p>PICKUP/UTILITY TRUCK                      1.50</p> <hr/> <p><u>Materials</u>                      <u>Qty</u></p> <p>LOOP WIRE                      500.0 FO</p> <p>SEALANT (LOOPS)                      24.0 PO</p>	<p><b>PRE-DEPARTURE</b></p> <p>1. Ready equipment and perform CDL inspection</p> <p>2. Travel to work stie</p> <p><b>AT WORK SITE</b></p> <p>3. Connect lap top as required.</p> <p>4. Connect video monitor as required.</p> <p>5. Analyze problem and observe operation</p> <p>6. Check programming</p> <p>7. Change as needed.</p> <p><b>END OF SHIFT</b></p> <p>8. Document work.</p>	<p>- Traffic Control</p> <p>- Appropriate PPE</p> <p>- Check connections</p> <p>Observe operation</p>
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<b>FEATURE INVENTORY ITEM</b>	<b>EFFECTIVE</b>	<b>SUPERCEDES</b>
39.00 INTSECT		
<b>AVERAGE DAILY PRODUCTION</b>	<b>APPROVAL</b>	
10.00 LABOR HR		

**ACTIVITY GUIDELINE**  
**MAINTENANCE MANAGEMENT SYSTEM**

City of Reno  
 Management Unit : 0000122 - SIGNALS

<b>WORK ACTIVITY</b>	<b>LED REPLACE</b>	<b>CODE</b>	<b>245</b>
<b>DESCRIPTION OF WORK</b>			

All work required to replace LEDs as needed.

<b>PLANNING CRITERIA</b>	07/01	08/01	09/01	10/01	11/01	12/01	01/01	02/01	03/01	04/01	05/01	06/01
	07/31	08/31	09/30	10/31	11/30	12/31	01/31	02/29	03/31	04/30	05/31	06/30
	7	8	9	10	9	9	8	8	9	8	8	7

Performed as needed.

<b>RESOURCE REQUIREMENTS</b>	<b>WORK METHOD</b>	<b>CHECK POINTS</b>												
<table border="0"> <tr> <td><i>Personnel</i></td> <td><i>Qty</i></td> </tr> <tr> <td>TRF SIG MECH</td> <td>1.25</td> </tr> <tr> <td><i>Equipment</i></td> <td><i>Qty</i></td> </tr> <tr> <td>BOOM TRUCK</td> <td>1.00</td> </tr> <tr> <td><i>Materials</i></td> <td><i>Qty</i></td> </tr> <tr> <td>.L LAMP LED</td> <td>11.0 EA</td> </tr> </table>	<i>Personnel</i>	<i>Qty</i>	TRF SIG MECH	1.25	<i>Equipment</i>	<i>Qty</i>	BOOM TRUCK	1.00	<i>Materials</i>	<i>Qty</i>	.L LAMP LED	11.0 EA	<p>PRE-DEPARTURE</p> <ol style="list-style-type: none"> <li>Ready and perform CDL inspection check.</li> <li>Pick up boom truck.</li> <li>Load LEDs</li> </ol> <p>AT WORK SITE</p> <ol style="list-style-type: none"> <li>Replace LED</li> </ol> <p>END OF SHIFT</p> <ol style="list-style-type: none"> <li>Document work</li> </ol>	<ul style="list-style-type: none"> <li>- Appropriate PPE</li> <li>- Follow current NV Work Zone Traffic Control Handbook and MUTCD</li> <li>- Check head alignment and tightness.</li> <li>- Check backplate for looseness</li> </ul>
<i>Personnel</i>	<i>Qty</i>													
TRF SIG MECH	1.25													
<i>Equipment</i>	<i>Qty</i>													
BOOM TRUCK	1.00													
<i>Materials</i>	<i>Qty</i>													
.L LAMP LED	11.0 EA													

<b>FEATURE INVENTORY ITEM</b>	<b>EFFECTIVE</b>	<b>SUPERCEDES</b>
3000.00 EACH		
<b>AVERAGE DAILY PRODUCTION</b>	<b>APPROVAL</b>	
15.00 LEDES		

**ACTIVITY GUIDELINE**  
**MAINTENANCE MANAGEMENT SYSTEM**

City of Reno  
 Management Unit : 0000122 - SIGNALS

<b>WORK ACTIVITY</b>	<b>SIGNAL HEAD REPAIR</b>	<b>CODE</b>	247
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**DESCRIPTION OF WORK**

All work required to change lenses, visors, back plates, sockets, internal wires, alignment, frame to assure proper operation of traffic signal.

<b>PLANNING CRITERIA</b>	07/01	08/01	09/01	10/01	11/01	12/01	01/01	02/01	03/01	04/01	05/01	06/01
	07/31	08/31	09/30	10/31	11/30	12/31	01/31	02/29	03/31	04/30	05/31	06/30
	8	8	9	8	8	9	7	8	9	8	8	10

Work is performed as needed.

<b>RESOURCE REQUIREMENTS</b>	<b>WORK METHOD</b>	<b>CHECK POINTS</b>
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<p><u>Personnel</u> Qty</p> <p>TRF SIG MECH 1.75</p> <p><u>Equipment</u> Qty</p> <p>BOOM TRUCK 0.75</p> <p>PICKUP/UTILITY TRUCK 0.25</p> <p><u>Materials</u> Qty</p> <p>DOG HOUSE SIGNAL HE 2.0 EA</p>	<p>PRE-DEPARTURE</p> <p>1. Pick up boom truck and perform CDL inspection</p> <p>AT WORK SITE</p> <p>2. Set up work zone</p> <p>3. Perform repair as needed.</p> <p>END OF SHIFT</p> <p>4. Document work.</p>	<p>- Appropriate PPE</p> <p>- Follow current NV Work Zone Traffic Control Handbook and MUTCD</p>
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<b>FEATURE INVENTORY ITEM</b>	<b>EFFECTIVE</b>	<b>SUPERCEDES</b>
3000.00 SIGNAL HD		
<b>AVERAGE DAILY PRODUCTION</b>	<b>APPROVAL</b>	
5.00 SIGNAL HD		

**ACTIVITY GUIDELINE**  
**MAINTENANCE MANAGEMENT SYSTEM**

City of Reno  
 Management Unit : 0000122 - SIGNALS

<b>WORK ACTIVITY</b>	<b>ILLUM STR NAME SIGN MAINT</b>	<b>CODE</b>	<b>252</b>
<b>DESCRIPTION OF WORK</b>			

Maintenance and repair of illuminated street signs. Work may include replacement of bulbs, ballasts, fuses, wiring, missing or damaged name panels and checking sign mounting hardware. This effort insures proper direction to motorists and pedestrians.

<b>PLANNING CRITERIA</b>	07/01	08/01	09/01	10/01	11/01	12/01	01/01	02/01	03/01	04/01	05/01	06/01
	07/31	08/31	09/30	10/31	11/30	12/31	01/31	02/29	03/31	04/30	05/31	06/30
	8	8	9	8	8	9	8	8	9	8	8	9

Performed in response to service requests or as reported in quarterly street light survey and every 36 months per local standards.

<b>RESOURCE REQUIREMENTS</b>	<b>WORK METHOD</b>	<b>CHECK POINTS</b>																								
<table border="0"> <tr> <td><i>Personnel</i></td> <td><i>Qty</i></td> </tr> <tr> <td>TRF SIG MECH</td> <td>1.25</td> </tr> <tr> <td>TRF SIG TECH</td> <td>0.20</td> </tr> <tr> <td><i>Equipment</i></td> <td><i>Qty</i></td> </tr> <tr> <td>BOOM TRUCK</td> <td>1.00</td> </tr> <tr> <td><i>Materials</i></td> <td><i>Qty</i></td> </tr> <tr> <td>SL BALLAST</td> <td>2.0 EA</td> </tr> <tr> <td>FL BULBS</td> <td>14.0 EA</td> </tr> <tr> <td>FUSES</td> <td>4.0 EA</td> </tr> <tr> <td>SEALING PADS</td> <td>4.0 EA</td> </tr> <tr> <td>SOCKETS</td> <td>2.0 EA</td> </tr> <tr> <td>TAPE</td> <td>1.0 RO</td> </tr> </table>	<i>Personnel</i>	<i>Qty</i>	TRF SIG MECH	1.25	TRF SIG TECH	0.20	<i>Equipment</i>	<i>Qty</i>	BOOM TRUCK	1.00	<i>Materials</i>	<i>Qty</i>	SL BALLAST	2.0 EA	FL BULBS	14.0 EA	FUSES	4.0 EA	SEALING PADS	4.0 EA	SOCKETS	2.0 EA	TAPE	1.0 RO	<p><b>PRE-DEPARTURE</b></p> <ol style="list-style-type: none"> <li>Pick up boom truck and perform CDL inspection check.</li> <li>Load materials.</li> <li>Check quarterly list &amp; establish route.</li> <li>Proceed to work location.</li> </ol> <p><b>AT WORK SITE</b></p> <ol style="list-style-type: none"> <li>Setup work zone as needed</li> <li>Turn on override or cover photo control.</li> <li>Replace bulbs.</li> <li>Check panel thumb screws.</li> <li>Check mounting and hardware.</li> <li>Uncover photo control.</li> </ol> <p><b>END OF SHIFT</b></p> <ol style="list-style-type: none"> <li>Document work.</li> </ol>	<ul style="list-style-type: none"> <li>- Set up route</li> <li>- Appropriate PPE</li> <li>- Follow current NV Work Zone Traffic Control Handbook and MUTCD</li> <li>- Check for incoming voltage</li> <li>- Check fuses</li> <li>- Trouble shoot sockets and ballasts</li> <li>- Replace or repair as needed</li> </ul>
<i>Personnel</i>	<i>Qty</i>																									
TRF SIG MECH	1.25																									
TRF SIG TECH	0.20																									
<i>Equipment</i>	<i>Qty</i>																									
BOOM TRUCK	1.00																									
<i>Materials</i>	<i>Qty</i>																									
SL BALLAST	2.0 EA																									
FL BULBS	14.0 EA																									
FUSES	4.0 EA																									
SEALING PADS	4.0 EA																									
SOCKETS	2.0 EA																									
TAPE	1.0 RO																									

<b>FEATURE INVENTORY ITEM</b>	<b>EFFECTIVE</b>	<b>SUPERCEDES</b>
800.00 SIGNS		
<b>AVERAGE DAILY PRODUCTION</b>	<b>APPROVAL</b>	
7.00 SIGNS		

**ACTIVITY GUIDELINE**  
**MAINTENANCE MANAGEMENT SYSTEM**

City of Reno  
 Management Unit : 0000122 - SIGNALS

<b>WORK ACTIVITY</b>	<b>ILLUM STREET SIGNS</b>	<b>CODE</b>	<b>253</b>
<b>DESCRIPTION OF WORK</b>			

Maintenance and repair of illuminated street signs. Work may include replacement of bulbs, ballasts, fuses, wiring, missing or damaged name panels and checking sign mounting hardware. This effort insures proper direction to motorists and pedestrians.

<b>PLANNING CRITERIA</b>	07/01	08/01	09/01	10/01	11/01	12/01	01/01	02/01	03/01	04/01	05/01	06/01
	07/31	08/31	09/30	10/31	11/30	12/31	01/31	02/29	03/31	04/30	05/31	06/30
	10	10	9	8	8	7	7	7	8	8	9	9

Performed in response to service requests or as reported in street light quarterly survey. Signs include one way arrows and No left turn signs.

<b>RESOURCE REQUIREMENTS</b>	<b>WORK METHOD</b>	<b>CHECK POINTS</b>																		
<table border="0"> <tr> <td><u>Personnel</u></td> <td><u>Qty</u></td> </tr> <tr> <td>TRF SIG MECH</td> <td>1.00</td> </tr> <tr> <td>TRF SIG TECH</td> <td>0.40</td> </tr> <tr> <td><u>Equipment</u></td> <td><u>Qty</u></td> </tr> <tr> <td>BOOM TRUCK</td> <td>1.00</td> </tr> <tr> <td><u>Materials</u></td> <td><u>Qty</u></td> </tr> <tr> <td>BALLAST</td> <td>1.0 EA</td> </tr> <tr> <td>FLOURES TUBES</td> <td>20.0 EA</td> </tr> <tr> <td>PHOTOCELLS</td> <td>2.0 EA</td> </tr> </table>	<u>Personnel</u>	<u>Qty</u>	TRF SIG MECH	1.00	TRF SIG TECH	0.40	<u>Equipment</u>	<u>Qty</u>	BOOM TRUCK	1.00	<u>Materials</u>	<u>Qty</u>	BALLAST	1.0 EA	FLOURES TUBES	20.0 EA	PHOTOCELLS	2.0 EA	<p><b>PRE-DEPARTURE</b></p> <ol style="list-style-type: none"> <li>Pick up boom truck and perform CDL inspection check.</li> <li>Load materials.</li> <li>Check requests &amp; establish route.</li> <li>Proceed to work location.</li> </ol> <p><b>AT WORK SITE</b></p> <ol style="list-style-type: none"> <li>Setup work zone as needed.</li> <li>Turn on override or cover photo control.</li> <li>Replace bulbs.</li> <li>Check panel thumb screws.</li> <li>Check mounting and securoness of hardware.</li> <li>Uncover photo control.</li> </ol> <p><b>END OF SHIFT</b></p> <ol style="list-style-type: none"> <li>Document work.</li> </ol>	<ul style="list-style-type: none"> <li>- Set up route</li> <li>- Appropriate PPE</li> <li>- Follow current NV Work Zone Traffic Control Handbook and MUTCD</li> <li>- Check for incoming voltage</li> <li>- Check fuses</li> <li>- Trouble shoot sockets and ballasts</li> <li>- Replace or repair as needed</li> </ul>
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<b>FEATURE INVENTORY ITEM</b>	<b>EFFECTIVE</b>	<b>SUPERCEDES</b>
100.00 SIGNS		
<b>AVERAGE DAILY PRODUCTION</b>	<b>APPROVAL</b>	
4.00 SIGNS		